

What is claimed:

1. A laser engraver comprising:

- a. a work surface for supporting a workpiece;
- b. a laser having a beam; and
- 5 c. means for aiming said laser beam at said workpiece.

2. The laser engraver of claim 1, wherein said means for aiming said laser beam at said workpiece comprises a reflector disposed between said laser and said workpiece.

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3. The laser engraver of claim 2, further comprising means for moving said reflector relative to said workpiece.

4. The laser engraver of claim 3, wherein said means for moving said reflector relative to said workpiece comprises:

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- a. a first rail situated along one side of said work surface;
- b. a second rail situated along the opposite side of said work surface from said first rail, wherein said first and second rails are oriented parallel to one another;
- 20 c. a third rail, oriented perpendicular to said first and second rails, and slidably mounted to said first and second rails;
- d. a carriage affixed to said reflector and slidably mounted to said third rail;
- e. means for moving said third rail along said first and second rails; and

f. means for moving said carriage along said third rail.

5. The laser engraver of claim 4, wherein said means for moving said third rail along said first and second rails comprises a motorized drive assembly.

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6. The laser engraver of claim 4, wherein said means for moving said carriage along said third rail comprises a motorized drive assembly.

7. The laser engraver of claim 1, wherein said work surface is a substantially flat surface.

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8. The laser engraver of claim 4, further comprising means for maintaining the focus of said laser beam on said workpiece.

9. The laser engraver of claim 8, wherein said means for maintaining the focus of said laser beam on said workpiece comprises:

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- a. a laser diode having a beam situated at one end of said third rail;
- b. a receptor at the opposite side of said third rail from said laser diode;
- c. a plunger body having a port between said laser diode and said receptor,  
wherein said port is aligned with said laser beam;
- d. a plunger rod slidably received within said plunger body;
- e. a spring biasing said plunger rod away from said port; and

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- f. means for selectively raising and lowering said work surface to a predetermined distance from said reflector when said laser beam is broken.

5      10. A laser engraver comprising:

- a. a cabinet having a top;
- b. a work surface along the top of said cabinet;
- c. a gantry assembly affixed to the top of said cabinet comprising
  - i. a first rail situated along one side of said work surface;
  - 10      ii. a second rail situated along the opposite side of said work surface from said first rail, wherein said first and second rails are oriented parallel to one another;
  - iii. a third rail, oriented perpendicular to said first and second rails, and slidably mounted to said first and second rails;
  - 15      iv. a carriage slidably mounted to said third rail;
  - v. a motorized drive mechanism for moving said third rail along said first and second rails; and
  - vi. a motorized drive mechanism for moving said carriage along said third rail;
- 20      d. a reflector mounted to said carriage, wherein said reflector is oriented toward said work surface;
- e. a laser having a beam, wherein said beam is directed at said reflector;
- and

- f. a computer for controlling the position of said reflector relative to said work surface.

11. The laser engraver of claim 10, further comprising:

- 5 a. a laser diode having a beam situated at one end of said third rail;
- b. a receptor at the opposite end of said third rail from said laser diode;
- c. a plunger body having a port between said laser diode and said receptor, wherein said port is aligned with said laser beam;
- d. a plunger rod slidably received within said plunger body;
- 10 e. a spring biasing said plunger rod away from said port; and
- f. means for selectively raising and lowering said work surface to a predetermined distance from said reflector when said laser beam is broken.